

LIST OF CURRENT CLAIMS

1. (Currently Amended) Method for adjusting a compressed air installation with several compressors, ~~which compressed air~~ said installation (1) ~~mainly consists of comprising~~ two or more electrically driven compressors (2-3-4) ~~of the kind known as any of the designations: what is called the 'loaded/unloaded' compressor; (2) type and/or of the turbo compressor; (3) type and/or of the compressor (4) type with and~~ variable rotational speed compressor, said ~~whereby these compressors (2-3-4) are each being connected to a single compressed air network via (8) with their respective outlet outlets (5-6-7), and wherein whereby each compressor (2-3-4) is provided with at least one one or several control unit units (11-12-15-19-20-22-26-34-35), and further wherein characterised in that the method makes use of a control box (28) onto to which is connected a pressure sensor (32) of the above-mentioned comprising part of said compressed air network is used (8), which said control box enabling adjustment of (28) makes it possible to adjust the pressure (P) in said the above-mentioned compressed air network relative to (8) around a settable target pressure (PS) to be set and within a pressure interval range which is limited by a minimum pressure (P_{MIN}) to be set and a maximum pressure (P_{MAX}) to be set, and wherein whereby the above-mentioned adjustment takes place by controlling the flow (Q) of one or several of the above-mentioned compressors (2-3-4), in particular in order to increase the overall flow supplied by the compressors (2-3-4) when the pressure drops below a desired level too much, and in order to lower the overall supplied flow when the pressure exceeds a desired level becomes too high.~~

2. (Currently Amended) Method according to claim 1, wherein ~~characterized in that~~ the control box (28) controls the overall flow of the compressed air installation (1) by giving at least one control order to the ~~aforesaid~~ control unit (11-12-15-19-20-22-26-34-35) of a compressor, which control orders may include one or more orders selected from the group consisting of ~~consist among others in~~ starting and/or stopping one or several compressors (2-3-4); in opening or closing a controlled inlet valve (11-19) of one or several compressors; in opening or closing an exhaust valve (12-20) of one or several

compressors (2-3-4) to a more or lesser degree; and in adjusting the rotational speed of one or several compressors (3-4-5).

3. (Currently Amended) Method according to claim 1, wherein ~~1 or 2,~~ characterised ~~in that it consists in that~~ when the pressure (P) in the compressed air network (8) rises above the set target pressure (PS), the control box (28) will increase the overall flow[[,]] a certain length of time before the set maximum pressure (P~~MAX~~) is reached, and when the pressure (P) in the compressed air network (8) drops below the set target pressure (PS), the control box (28) will reduce the overall flow[[,]] a certain length of time before the set minimum pressure (P~~MIN~~) is reached.

4. (Currently Amended) Method according to claim 1, wherein ~~any of the preceding claims, characterised in that~~ an evaluation table is stored in the memory of the control box (28) beforehand for every compressor (2-3-4) or for every type of compressor of the compressed air installation (1), such that ~~whereby~~ for every working condition of the respective compressor (2-3-4) concerned, the influence of a ~~an~~ aforesaid control order is assessed, and such that ~~whereby~~ for every control order of the compressor concerned, a score is given which is positive when the influence of said order is favourable to the output of the compressed air installation (1), and which is negative when the ~~aforesaid~~ influence is unfavourable, and whose absolute value increases ~~is all the greater as the favourable or unfavourable influence increases is bigger.~~

5. (Currently Amended) Method according to claim 4, wherein ~~characterised in that,~~ while the compressed air installation (1) is operational, in order to select the most favourable control order of the scores, the scores of all positive control orders which can direct the overall flow in the required direction in order to bring the pressure (P) in the compressed air network (8) closer to the set target pressure (PS), can be mutually compared by an algorithm, either periodically or continuously, after which the control order concerned with the highest score ~~can be~~ is implemented.

6. (Currently Amended) Method according to claim 5, wherein ~~characterised in that~~ the algorithm, when selecting the most favourable control order, ~~will also take~~ takes into

account the overall score of combined control orders of one or several compressors (2-3-4) which can direct the overall flow in the required direction, ~~whereby this~~ such that the control order or combined control order having the highest score is subsequently carried out ~~with the highest score~~.

7. (Currently Amended) Method according to claim 5, wherein ~~or 6, characterised in that~~, in order to select the most favourable control order, the ~~above-mentioned~~ scores of the control orders are increased ~~with~~ by a value which is equal to the difference between the supplied flow and the required flow after a hypothetical implementation of the control order concerned, multiplied by a negative weighing factor whose absolute value is bigger in the case where ~~the above-mentioned~~ said difference is positive than in the case where ~~this~~ said difference is negative.

8. (Currently Amended) Method according to claim 5, wherein ~~any of claims 5 to 7, characterised in that~~, in order to select the most favourable control order, the ~~above-mentioned~~ scores of the control orders are increased ~~with~~ by a value which is equal to the difference between the supplied flow before the control order and the hypothetically supplied flow following the control order, multiplied by a negative weighing factor.

9. (Currently Amended) Method according to claim 5, wherein ~~any of claims 5 to 8, characterised in that~~, if an even wear is required for all the compressors (2-3-4), a value is added to the ~~aforesaid~~ scores which is equal to the number of working hours of the each respective compressor (2-3-4) concerned, multiplied by a negative weighing factor.

10. (Currently Amended) Method according to claim 5, wherein ~~any of claims 5 to 9, characterised in that~~, if a forced priority for starting the compressors (2-3-4) is required, a starting priority is accorded to the ~~aforesaid~~ compressors which is added to the above-mentioned scores after multiplication with a negative weighing factor.

11. (Currently Amended) Method according to claim 5, wherein ~~any of the preceding claims 5 to 10, characterised in that~~, if a low selection priority is required for a

compressor (2-3-4), a positive value will be added up to the aforesaid scores of this the respective compressor which is all the greater as the priority is low.

12. (Currently Amended) Control box for adjusting a compressed air installation comprising one or several compressors (2-3-4) according to the method of claim 1, said control box having ~~one of the preceding claims, characterised in that it is mainly provided with~~ connections to one or several control units (11-12-15-19-20-22-26-34-35) of the compressors (2-3-4) for the connection of the control box (28) and with a pressure sensor (32) of comprising the compressed air installation (1); a memory (29) in which can be stored an evaluation table with scores to be inputted by the user/ an arithmetic unit (30) with an algorithm which makes it possible to compare the aforesaid scores and to give a control order as a function of the highest selected score.

13. (Currently Amended) Compressed air installation for carrying out applying the method according to claim 1, comprising one or more compressors selected from the group of compressor types consisting of ~~any of claims 1 to 11, characterised in that it mainly consists of one or several compressors (2) of what is called the 'loaded/unloaded' compressor type; one or several compressors (3) of the turbo compressor type; and one or several compressors (4) of the type with a variable rotational speed~~ compressor, wherein the ~~whereby these~~ compressors (2-3-4) are each connected to a single compressed air network (8) ~~with~~ via their outlets (5-6-7), and ~~whereby wherein~~ each compressor (2-3-4) is provided with one or several control units (11-12-15-19-20-22-26-34-35); a pressure sensor (32); and finally a control box (28) which is connected to one or several of the ~~above-mentioned~~ control units and to the ~~above-mentioned~~ pressure sensor (32).